

## **Federal Operating Permit Article 1**

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Pactiv Corporation
Facility Name:	Pactiv Corporation
Facility Location:	172 Pactiv Way Winchester, Virginia
Registration Number:	81095
Permit Number:	VRO81095

Effective Date	<u>May 16, 2005</u>
Amendment Date	<u>January 9, 2007</u>
Expiration Date	<u>May 15, 2010</u>
Deputy Regional Director, Valley Region	<u>Larry M. Simmons</u>
Signature Date	<u>January 9, 2007</u>

Table of Contents, 2 pages  
Permit Conditions, 36 pages  
Source Testing Report Format  
Attachment A - Regenerative Thermal Oxidizer CAM Plan, 1 page

## Table of Contents

<b>I.</b>	<b>FACILITY INFORMATION.....</b>	<b>4</b>
<b>II.</b>	<b>EMISSION UNITS .....</b>	<b>5</b>
<b>III.</b>	<b>PROCESS EQUIPMENT REQUIREMENTS – TABLEWARE PRODUCT LINES, E-2 AND E-3 .....</b>	<b>9</b>
A.	LIMITATIONS.....	9
B.	PERIODIC MONITORING .....	10
C.	COMPLIANCE ASSURANCE MONITORING (CAM).....	11
D.	RECORDKEEPING .....	12
E.	TESTING.....	13
F.	REPORTING .....	14
<b>IV.</b>	<b>PROCESS EQUIPMENT REQUIREMENTS – GREEN GUARD UNDERLAYMENT AND GREEN GUARD INSULATION PRODUCT LINES, E-1 AND E-6.....</b>	<b>16</b>
A.	LIMITATIONS.....	16
B.	MONITORING AND RECORDKEEPING .....	17
C.	TESTING.....	18
D.	REPORTING .....	19
<b>V.</b>	<b>FACILITY WIDE CONDITIONS .....</b>	<b>20</b>
A.	LIMITATIONS.....	20
B.	MONITORING AND RECORDKEEPING .....	22
C.	TESTING.....	23
D.	REPORTING .....	24
<b>VI.</b>	<b>INSIGNIFICANT EMISSION UNITS.....</b>	<b>25</b>
<b>VII.</b>	<b>PERMIT SHIELD &amp; INAPPLICABLE REQUIREMENTS.....</b>	<b>27</b>
<b>VIII.</b>	<b>GENERAL CONDITIONS .....</b>	<b>29</b>
A.	FEDERAL ENFORCEABILITY .....	29
B.	PERMIT EXPIRATION .....	29
C.	RECORDKEEPING AND REPORTING.....	30
D.	ANNUAL COMPLIANCE CERTIFICATION .....	31
E.	PERMIT DEVIATION REPORTING .....	32
F.	FAILURE/MALFUNCTION REPORTING.....	32
G.	SEVERABILITY .....	32
H.	DUTY TO COMPLY .....	32
I.	NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE .....	32
J.	PERMIT MODIFICATION.....	33
K.	PROPERTY RIGHTS .....	33
L.	DUTY TO SUBMIT INFORMATION.....	33
M.	DUTY TO PAY PERMIT FEES .....	33
N.	FUGITIVE DUST EMISSION STANDARDS .....	33
O.	STARTUP, SHUTDOWN, AND MALFUNCTION .....	34
P.	ALTERNATIVE OPERATING SCENARIOS.....	34
Q.	INSPECTION AND ENTRY REQUIREMENTS .....	34
R.	REOPENING FOR CAUSE.....	35
S.	PERMIT AVAILABILITY .....	35
T.	TRANSFER OF PERMITS .....	36
U.	MALFUNCTION AS AN AFFIRMATIVE DEFENSE .....	36
V.	PERMIT REVOCATION OR TERMINATION FOR CAUSE .....	37

W.	DUTY TO SUPPLEMENT OR CORRECT APPLICATION .....	37
X.	STRATOSPHERIC OZONE PROTECTION .....	37
Y.	ASBESTOS REQUIREMENTS .....	37
Z.	ACCIDENTAL RELEASE PREVENTION .....	38
AA.	CHANGES TO PERMITS FOR EMISSIONS TRADING.....	38
BB.	EMISSIONS TRADING.....	38
CC.	OPERATIONAL FLEXIBILITY .....	38
<b>IX.</b>	<b>STATE-ONLY ENFORCEABLE REQUIREMENTS.....</b>	<b>39</b>
A.	LIMITATIONS.....	39
B.	MONITORING AND RECORDKEEPING .....	39

## **I. Facility Information**

### **Permittee**

Pactiv Corporation  
172 Pactiv Way  
Winchester, Virginia 22603

### **Responsible Official**

William Wolfe  
Plant Manager

### **Facility**

Pactiv Corporation  
172 Pactiv Way  
Winchester, Virginia 22603

### **Contact Person**

Jason Malone  
Plant Engineer  
540-667-9740 ext. 220

**AFS Identification Number:** 51-069-0096

**Facility Description:** SIC Code 3086 - Plastic Foam Products

NAICS 326140 - Polystyrene Foam Product Manufacturing

Pactiv Corporation operates an extruded polystyrene foam production facility in Winchester, Virginia. The facility produces disposable foam products for the consumer market such as plates, platters, bowls, trays and a variety of “take-out” type food containers and industrial foam products for building underlayment and insulation. There are two tableware extrusion lines that produce rollstock. Rollstock is then converted into finished products by eight thermoforming lines. The facility also has two industrial product extrusion lines and one housewrap converting line. In addition, there are four reclaim lines to reprocess off spec and trim scrap. The basic operations at the facility include raw material receiving and handling, extrusion, roll storage, thermoforming, finished goods storage and product reclaim.

## II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Tableware Product Lines (E-2 and E-3)</b>							
ES-21 – ES-22	-	Foam Extruders E-2 and E-3	-	-	-	-	3/25/03
ES-27 ES-28 ES-28a	S27	Extrusion Laminator E-2	-	Electrostatic Precipitator (Smog Hog) United Air Specialists Model # SH20PEH	C27	PM/PM10	3/25/03
ES-29 ES-29a ES-30	S29	Extrusion Laminator E-3	-	Electrostatic Precipitator (Smog Hog) United Air Specialists Model # SH20PEH	C29	PM/PM-10	3/25/03
ES-31	-	Flexographic Printer	1250 lbs of foam/hr	-	-	-	3/21/03
ES-67	-	Flexographic Printer	1250 lbs of foam/hr	-	-	-	3/21/03
ES-32	-	Finished Roll Storage Warehouse	-	-	-	-	3/25/03
ES-33	S75	Roll and Scrap Grinders including Storage Area	1000 lbs of product/hr annual average	16.7 R95NG1 Regenerative Thermal Oxidizer	C75	VOC	3/25/03

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
ES-33	V42 – V45 and V64 – V66	Roll and Scrap Grinders including Storage Area	1000 lbs of product/hr annual average	American Air Filter Co. Baghouse Model # 8-36-396	C42 – C45	PM/PM-10	3/25/03 and 6/30/00
				Ultra Industries Baghouse Model # BBVC-64M36-84	C64 – C66		
	V46 V48 V49			DCE-Vokes, Inc. Baghouse Model # DLMV30/1SH	C46, C48 C49		
ES-34	-	Finished Goods Storage Warehouse	-	-	-	-	3/25/03
ES-42 – ES-46 ES-48 ES-49	S75	Fluff (Ground Scrap) Storage Silo	2513 ft <sup>3</sup> each	16.7 R95NG1 Regenerative Thermal Oxidizer	C75	VOC	3/25/03
ES-64 – ES-66	S75	Fluff (Ground Scrap) Storage Silo	2513 ft <sup>3</sup> each	16.7 R95NG1 Regenerative Thermal Oxidizer	C75	VOC	6/30/00
ES-42 – ES-45	V42 – V45	Fluff (Ground Scrap) Storage Silo	2513 ft <sup>3</sup> each	American Air Filter Co. Baghouse Model # 8-36-396	C42 – C45	PM/PM-10	3/25/03
ES-64 – ES-66	V64 – V66	Fluff (Ground Scrap) Storage Silo	2513 ft <sup>3</sup> each	Ultra Industries Baghouse Model # BBVC-64M36-84	C64 – C66	PM/PM-10	6/30/00
ES-46 ES-48 ES-49	V46 V48 V49	Fluff (Ground Scrap) Storage Silo	2513 ft <sup>3</sup> each	DCE-Vokes, Inc. Baghouse Model # DLMV30/1SH	C46 C48 C49	PM/PM-10	3/25/03

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
ES-54 – ES-55	S75	Reclaim Extruder	-	16.7 R95NG1 Regenerative Thermal Oxidizer	C75	VOC	3/25/03
ES-54 – ES-55	S54	Reclaim Extruder	-	Electrostatic Precipitator (Smog Hog) United Air Specialists Model # SH20PEH	C54	PM/PM-10	3/25/03
ES-56 – ES-57	V56 – V57	Scrap Storage Bin	-	DCE-Vokes, Inc. Baghouse Model # DLMV30/1SH	C56 – C57	PM/PM-10	3/25/03
ES-75	S75	Regenerative Thermal Oxidizer	5.9 MMBtu/hr; 300 lbs/hr Hydrocarbon input	-	-	-	3/25/03
<b>Green Guard Underlayment and Green Guard Insulation Product Lines (E-1 and E-6)</b>							
ES-20	-	Foam Extruder E-1	-	-	-	-	3/25/03
ES-24	-	Foam Extruder E-6	-	-	-	-	3/25/03
ES-25 ES-25a ES-26 ES-26a	S25	Extrusion Laminator	-	Electrostatic Precipitator (Smog Hog) United Air Specialists Model # SH20PEH	C25 – C26	PM/PM-10	3/25/03
ES-33a	V50 – V51	Roll and Scrap Grinders including Storage Area	1000 lbs of product/hr annual average	American Air Filter Co. Baghouse Model # 8-36-396	C50 – C51	PM/PM-10	3/25/03
ES-50 – ES-51	V50 – V51	Fluff (Ground Scrap) Storage Silo	2513 ft <sup>3</sup> each	American Air Filter Co. Baghouse Model # 8-36-396	C50 – C51	PM/PM-10	3/25/03

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
ES-52 – ES-53	S52	Reclaim Extruders R-5 and R-6	-	Electrostatic Precipitator (Smog Hog) United Air Specialists Model # SHN20H	C52	PM/PM-10	3/25/03
ES-58	-	Finished Goods Storage Warehouse	-	-	-	-	3/25/03
ES-60	V51	Fluff (Ground Scrap) Storage Silo	2513 ft <sup>3</sup>	American Air Filter Co. Baghouse Model # 8-36-396	C51	PM/PM-10	10/20/04
ES-110	-	Ethyl Chloride Tank	18,000 gallons	-	-	-	-
ES-114	-	Blowing Agent Tank	30,000 gallons	-	-	-	-
ES-115	-	Flexographic Printer	1700 lbs of foam/hr	-	-	-	3/21/03
ES-116	-	Flexographic Printer	3000 lbs of foam/hr	-	-	-	3/21/03

\*The Size/Rated capacity is provided for informational purposes only and is not an applicable requirement.



### III. Process Equipment Requirements – Tableware Product Lines, E-2 and E-3

#### A. Limitations

1. Particulate emissions from each fluff storage silo (ES-42 - ES-46, ES-48, ES-49 and ES-64 - ES-66) and scrap storage bin (ES-56 and ES-57) shall be controlled by a fabric filter. Each fabric filter shall be provided with adequate access for inspection. (9 VAC 5-80-110 and Condition 3 of 6/30/00 Permit)
2. Visible emissions from each foam extruder (ES-21 and ES-22), extrusion laminator stack (S27 and S29), reclaim extruder stack (S54), scrap storage bin vent (V56 and V57) and fluff storage silo vent (V42 - V46, V48 and V49) shall not exceed twenty (20) percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty (30) percent opacity. This condition applies at all times except during startup, shutdown and malfunction. (9 VAC 5-80-110 and 9 VAC 5-50-80)
3. Visible emissions from each fluff storage silo (ES-64 - ES-66) shall not exceed 5% opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). (9 VAC 5-80-110 and Condition 7 of 6/30/00 Permit)
4. Particulate emissions from each foam extruder (ES-21 and ES-22), extrusion laminator stack (S27 and S29), reclaim extruder stack (S54), scrap storage bin vent (V56 and V57) and fluff storage silo vent (V42 - V46, V48, V49 and V64 - V66) shall not exceed the process weight limit as determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = emission rate in lb/hr

P = process weight rate in tons/hr

(9 VAC 5-80-110 and 9 VAC 5-40-260)

5. Volatile organic compound (VOC) emissions from each fluff storage silo (ES-42 - ES-46, ES-48, ES-49 and ES-64 - ES-66), reclaim extruder die (ES-54) and reclaim extruder vent (ES-54 and ES-55) shall be controlled by a regenerative thermal oxidizer (RTO) (ES-75) with a destruction efficiency of not less than 95% under maximum load. The RTO shall be provided with adequate access for inspection. (9 VAC 5-80-110, Conditions 3 and 7 of 3/25/03 Permit and Condition 4 of 6/30/00 Permit)

6. The RTO (ES-75) operating temperature shall be maintained between 1450°F and 2100°F in the center of the gravel bed (designated as TE-3).  
(9 VAC 5-80-110 and Condition 4 of 3/25/03 Permit)
7. The approved fuel for the RTO (ES-75) is natural gas. A change in the fuel may require a permit to modify and operate.  
(9 VAC 5-80-110 and Condition 5 of 3/25/03 Permit)
8. Visible emissions from the RTO (ES-75) shall not exceed 5 percent opacity except during periods of scheduled maintenance (such as bake-out periods) for the RTO (ES-75) when visible emissions shall not exceed 20 percent opacity. This condition applies at all times except during startup, shutdown, and malfunction. Opacity shall be determined by EPA Method 9 (reference 40 CFR 60, Appendix A).  
(9 VAC 5-80-110 and Condition 6 of 3/25/03 Permit)
9. The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:
  - a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
  - b. Maintain an inventory of spare parts.
  - c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
  - d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.  
(9 VAC 5-80-110, Condition 14 of 3/25/03 Permit and Condition 16 of 6/30/00 Permit)

## **B. Periodic Monitoring**

1. Each fabric filter (C42 - C46, C48, C49, C56 and C57) shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The device shall be installed in an accessible location and shall, to the extent practicable, be maintained by the permittee such that it is in proper working order at all times.  
(9 VAC 5-80-110)

2. Each fluff storage silo fabric filter (C64 - C66) shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the fabric filter is operating.  
(9 VAC 5-80-110 and Condition 5 of 6/30/00 Permit)
3. The control monitoring device used to continuously measure the differential pressure drop across the fabric filter (C64 - C66) shall be observed by the permittee with a frequency of not less than once per week. The permittee shall keep a log of the observations from the control monitoring device.  
(9 VAC 5-80-110 and Condition 6 of 6/30/00 Permit)
4. The permittee shall perform weekly inspections of each fluff storage silo vent (V42 - V46, V48 and V49) and scrap storage bin vent (V56 and V57). Each inspection shall include an observation of the presence of visible emissions and the pressure drop across each fabric filter (C42 - C46, C48, C49, C56 and C57). If during the inspection visible emissions are observed, a visible emission evaluation (VEE) of the stack shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9, unless timely corrective action is taken such that the fabric filter resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed 20%, the VEE shall be conducted for a total of 60 minutes. All observations, VEE results, and corrective actions taken shall be recorded.  
(9 VAC 5-80-110)
5. The permittee shall perform weekly inspections of each fluff storage silo vent (V64 - V66). Each inspection shall include an observation of the presence of visible emissions and the pressure drop across each fabric filter (C64 - C66). If during the inspection visible emissions are observed, a visible emission evaluation (VEE) of the stack shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9, unless timely corrective action is taken such that the fabric filter resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed 5%, the VEE shall be conducted for a total of 60 minutes. All observations, VEE results, and corrective actions taken shall be recorded.  
(9 VAC 5-80-110)

### **C. Compliance Assurance Monitoring (CAM)**

1. The RTO (ES-75) shall be equipped with a device to continuously measure and record the temperature at TE-3. The monitoring device for temperature shall be installed in an accessible location and calibrated, maintained and operated according

to the manufacturer's specifications. The calibration of the monitoring device shall be verified every six (6) months.

(9 VAC 5-80-110 and Condition 4 of 3/25/03 Permit)

2. The permittee shall conduct monitoring as specified in the Regenerative Thermal Oxidizer Compliance Assurance Monitoring (CAM) Plan (Attachment A) for the RTO (ES-75).  
(9 VAC 5-80-110 and 40 CFR 64.6(c))
3. The permittee shall develop a Quality Improvement Plan (QIP) for the RTO (ES-75) if more than six excursions from the chamber temperature indicator range (Indicator 1) specified in the Regenerative Thermal Oxidizer Compliance Assurance Monitoring (CAM) Plan (Attachment A) occur within a six-month reporting period, according to 40 CFR 64.8.  
(9 VAC 5-80-110 and 40 CFR 64.8)

#### **D. Recordkeeping**

1. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
  - a. The annual number of operating hours in which the RTO (ES-75) did not operate, calculated as the sum of each consecutive twelve (12) month period.
  - b. RTO (ES-75) natural gas consumption, calculated as the sum of each consecutive twelve (12) month period.
  - c. The annual throughput of VOCs to, and exhausted from, the RTO (ES-75), calculated as the sum of each consecutive twelve (12) month period.
  - d. Monthly material balance of blowing agents consumed and emitted.
  - e. Monthly material throughput, in pounds, for each Tableware product line, E-2 and E-3.
  - f. Inspection records as required by Conditions III.B.4 and III.B.5 including the date and time of the inspections.
  - g. Calibration of the monitoring device for temperature.

- h. Results of all visible emissions evaluations.
- i. Operation and control device monitoring records for each fabric filter for the fluff storage silos (ES-64 - ES-66) as required by Condition III.B.3.
- j. Air pollution control equipment training provided and all scheduled and non-scheduled maintenance as required by Condition III.A.9.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.  
(9 VAC 5-80-110, Condition 9 of 3/25/03 Permit and Condition 8 of 6/30/00 Permit)

- 2. Documentation of monitoring required by the Regenerative Thermal Oxidizer CAM Plan (Attachment A), to include but not limited to:
  - a. Measured temperature of the RTO (ES-75) at TE-3.
  - b. Records of daily inspections of the supplemental fuel indicator valves and the annual inspection of the poppet valves.
  - c. Method 25/25A stack test results.
  - d. Records of all excursions, including date, time and corrective actions taken.

(9 VAC 5-80-110, 40 CFR 64.9, 9 VAC 5-50-50 and Condition 9 of 3/25/03 Permit)

#### **E. Testing**

If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
PM/PM-10	EPA Methods 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

**F. Reporting**

1. Within 30 days following the end of each calendar quarter, Pactiv Corporation shall submit a report to the Director, Valley Region. Each report shall include:
  - a. The amounts and types of VOC blowing agents consumed and emitted from the Tableware product lines, E-2 and E-3, during each month of the quarter.
  - b. The number of operating hours in which the RTO (ES-75) did not operate, calculated for each month of the quarter.
  - c. The throughput of VOCs to, and exhausted from, the RTO (ES-75), calculated for each month of the quarter.

(9 VAC 5-80-110 and Condition 10 of 3/25/03 Permit)

2. The permittee shall furnish notification to the Director, Valley Region, of the intention to shutdown or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
  - a. Identification of the specific process to be taken out of service, as well as its location and registration number;
  - b. The expected length of time that the air pollution control equipment will be out of service;
  - c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
  - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-80-110 and Condition 13 of 6/30/00 Permit)

3. A written report containing the following information pertaining to the CAM Plan for the RTO (ES-75) shall be submitted to the Director, Valley Region, no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:
  - a. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions and the corrective actions taken;

- b. A description of actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the plan has been completed and reduced the likelihood of similar levels of excursions.

The information listed above may be included in the reports required by Condition VIII.C.3.

(9 VAC 5-80-110 and 40 CFR 64.9(a)(2))

#### **IV. Process Equipment Requirements – Green Guard Underlayment and Green Guard Insulation Product Lines, E-1 and E-6**

##### **A. Limitations**

1. Particulate emissions from each fluff storage silo (ES-50, ES-51 and ES-60) shall be controlled by a fabric filter. Each fabric filter shall be provided with adequate access for inspection.  
(9 VAC 5-80-110 and Condition 3 of 10/20/04 Permit)
2. Visible emissions from each foam extruder (ES-20 and ES-24), extrusion laminator stack (S25), reclaim extruder stack (S52) and fluff storage silo vent (V50) shall not exceed twenty (20) percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty (30) percent opacity. This condition applies at all times except during startup, shutdown and malfunction.  
(9 VAC 5-80-110 and 9 VAC 5-50-80)
3. Visible emissions from each fluff storage silo (ES-51 and ES-60) shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).  
(9 VAC 5-80-110, 9 VAC 5-50-80 and Condition 6 of 10/20/04 Permit)
4. Particulate emissions from each foam extruder (ES-20 and ES-24), extrusion laminator stack (S25), reclaim extruder stack (S52) and fluff storage silo (ES-50, ES-51 and ES-60) shall not exceed the process weight limit as determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = emission rate in lb/hr

P = process weight rate in tons/hr

- (9 VAC 5-80-110 and 9 VAC 5-40-260)
5. Authorization to modify the fluff storage silo (ES-60) shall become invalid, unless an extension is granted by the DEQ, if a program of modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.  
(9 VAC 5-80-110 and Condition 11b of 10/20/04 Permit)



**B. Monitoring and Recordkeeping**

1. The fabric filter (C50) shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The device shall be installed in an accessible location and shall, to the extent practicable, be maintained by the permittee such that it is in proper working order at all times.  
(9 VAC 5-80-110)
2. The fabric filter (C51) shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, at a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the fabric filter is operating.  
(9 VAC 5-80-110 and Condition 4 of 10/20/04 Permit)
3. The control monitoring device used to continuously measure the differential pressure drop across the fabric filter (C51) shall be observed by the permittee with a frequency of not less than once per week. The permittee shall keep a log of the observations from the control monitoring device.  
(9 VAC 5-80-110 and Condition 5 of 10/20/04 Permit)
4. The permittee shall perform weekly inspections of the fluff storage silo vent (V50). Each inspection shall include an observation of the presence of visible emissions and the pressure drop across the fabric filter (C50). If during the inspection visible emissions are observed, a visible emission evaluation (VEE) of the stack shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9, unless timely corrective action is taken such that the fabric filter resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed 20%, the VEE shall be conducted for a total of 60 minutes. All observations, VEE results, and corrective actions taken shall be recorded.  
(9 VAC 5-80-110)
5. The permittee shall perform weekly inspections of the fluff storage silo vent (V51). Each inspection shall include an observation of the presence of visible emissions and the pressure drop across the fabric filter (C51). If during the inspection visible emissions are observed, a visible emission evaluation (VEE) of the stack shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9, unless timely corrective action is taken such that the fabric filter resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed 5%, the VEE shall be conducted for a total of 60 minutes. All observations, VEE results, and corrective actions taken shall be recorded.  
(9 VAC 5-80-110)

6. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
  - a. Monthly material balance of VOC blowing agents consumed and emitted.
  - b. Monthly material throughput, in pounds, for the Green Guard Underlayment and Green Guard Insulation product lines, E-1 and E-6.
  - c. Inspection records as required by Conditions IV.B.4 and IV.B.5 including the date and time of the inspections.
  - d. Results of all visible emissions evaluations.
  - e. Operation and control device monitoring records for the fabric filter (C51) for the fluff storage silos (ES-51 and ES-60) as required by Condition IV.B.3.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110, Condition 9 of 3/25/03 Permit and Condition 7 of 10/20/04 Permit)

### **C. Testing**

1. A visible emissions evaluation (VEE) in accordance with the 40 CFR Part 60, Appendix A, Method 9, shall be conducted by the permittee on the fluff storage silo (ES-60) fabric filter (C51). Each test shall consist of ten sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Director, Valley Region. The evaluation shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the fluff storage silo (ES-60) will be operated but in no event later than 180 days after start-up of the permitted fluff storage silo (ES-60). One copy of the test results shall be submitted to the Director, Valley Region, within 60 days after test completion and shall conform to the test report format enclosed with this permit.  
(9 VAC 5-80-110 and Condition 8 of 10/20/04 Permit)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Methods 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

**D. Reporting**

1. Within 30 days following the end of each calendar quarter, Pactiv Corporation shall submit a report to the Director, Valley Region. Each report shall include:
  - a. The amounts and types of VOC blowing agents consumed and emitted from the Green Guard Underlayment product line, E-1, during each month of the quarter.
  - b. The amounts and types of VOC blowing agents consumed and emitted from the Green Guard Insulation product line, E-6, during each month of the quarter.

(9 VAC 5-80-110 and Condition 10 of 3/25/03 Permit)

2. The permittee shall furnish written notification to the Director, Valley Region, of the actual start-up date of the fluff storage silo (ES-60) within 15 days after such date.  
(9 VAC 5-80-110 and Condition 9 of 10/20/04 Permit)

## **V. Facility Wide Conditions**

### **A. Limitations**

1. Volatile organic compound (VOC) emissions from the facility shall not exceed 245 tons per year, calculated monthly as the sum of each consecutive twelve (12) month period. Included in this VOC emission limit are all emissions defined as non-fugitive, which are emissions from the extruder die areas (ES-20, ES-21, ES-22 and ES-24), extrusion laminators (ES-25 - ES-30), roll aging room (ES-32), fluff storage silos (ES-42 - ES-46, ES-48 - ES-51, ES-60 and ES-64 - ES-66), reclaim extruders (ES-52 - ES-55), and reclaim extruder vents (ES-52 - ES-55).  
(9 VAC 5-80-110 and Condition 8 of 3/25/03 Permit)
2. The permittee shall apply no more than 200 kilograms (440 pounds) per month, for every month, of organic hazardous air pollutants (HAPs) on the flexographic printers (ES-31, ES-67, ES-115 and ES-116).  
(9 VAC 5-80-110, 40 CFR 63.821(b)(2) and Condition 6 of 3/21/03 Permit)
3. Volatile organic compound (VOC) emissions from the flexographic printers (ES-31, ES-67, ES-115 and ES-116) shall be controlled by the use of inks which meet the definition of low solvent ink, as applied and as stated in 9 VAC 5-40-5070 C.  
(9 VAC 5-80-110, 9 VAC 5-40-5080 A and Condition 3 of 3/21/03 Permit)
4. VOC emissions controls from cleanup, washup and disposal shall include the following, or equivalent, as a minimum:
  - a. VOC shall not be intentionally spilled, discarded to sewers, stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution control practices for minimizing practices.
  - b. All VOC containing receptacles shall be closed at all times except during loading and unloading.
  - c. VOC emissions shall be controlled by storing cleaning solutions and applicators in covered containers or machines with remote reservoirs when not in use.  
(9 VAC 5-80-110 and Condition 4 of 3/21/03 Permit)
5. The throughput of VOC to the flexographic printers (ES-31, ES-67, ES-115 and ES-116) shall be no more than 4.0 tons per year, calculated monthly as the sum of each consecutive 12 month period.  
(9 VAC 5-80-110 and Condition 5 of 3/21/03 Permit)

6. Emissions from the operation of the flexographic printers (ES-31, ES-67, ES-115 and ES-116) shall not exceed the limit specified below:

Volatile Organic Compounds 4.0 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period.

(9 VAC 5-80-110 and Condition 7 of 3/21/03 Permit)

7. Visible emissions from the flexographic printers (ES-31, ES-67, ES-115 and ES-116) shall not exceed 10 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).

(9 VAC 5-80-110, 9 VAC 5-40-80 and Condition 8 of 3/21/03 Permit)

8. Except as specified in this permit, the flexographic printers (ES-31, ES-67, ES-115 and ES-116) are to be operated in compliance with the federal requirements under 40 CFR 63, Subpart KK.

(9 VAC 5-80-110 and Condition 10 of 3/21/03 Permit)

9. Each storage tank (ES-110 and ES-114) shall be equipped with a control method that will remove, destroy, or prevent the discharge into the atmosphere of at least 60% by weight of VOC emissions during the filling of the storage tank. Achievement of this emission standard shall be demonstrated using control methods in Condition V.A.10. (9 VAC 5-80-110 and 9 VAC 5-40-3430 A)

10. Each storage tank (ES-110 and ES-114) shall be a pressure tank maintaining working pressure sufficient at all times to prevent vapor loss to the atmosphere, or be designed and equipped with one of the following vapor control systems:

- a. Filling of the storage tank through the use of a submerged fill pipe.
- b. Any system of equal or greater control efficiency to the system in Condition V.A.10.a provided such system is approved by the State Air Pollution Control Board.

(9 VAC 5-80-110 and 9 VAC 5-40-3440 A)

11. Visible emissions from each storage tank (ES-110 and ES-114) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A).

(9 VAC 5-80-110, 9 VAC 5-40-80, 9 VAC 5-50-80 and 9 VAC 5-40-3450)

12. Except where this permit is more restrictive, on February 5, 2007, the storage tank (ES-110) and affiliated operations shall comply with the requirements of 40 CFR 63, Subpart EEEE (Organic Liquids Distribution (Non-Gasoline) NESHAP).  
(9 VAC 5-80-110, 9 VAC 5-60-90, 9 VAC 5-60-100 and 40 CFR 63, Subpart EEEE)

## **B. Monitoring and Recordkeeping**

1. The permittee shall determine compliance with the emission limit established in Condition V.A.1 by calculating the monthly VOC emissions using an electronic spreadsheet previously approved by the Department of Environmental Quality. Revisions to the method of emission calculation, which includes changes to the spreadsheet, shall receive prior approval by the Director, Valley Region.  
(9 VAC 5-80-110 and Condition 9 of 3/25/03 Permit)
2. The permittee shall determine compliance with the organic HAPs limit established in Condition V.A.2 by calculating the monthly total organic hazardous air pollutants applied on the flexographic printers (ES-31, ES-67, ES-115 and ES-116) using the following equation:

$$E_{hap} = \sum_{i=1}^n M_{mat} W_{hap}$$

Where:

$E_{hap}$  = the total HAPs usage, in pounds  
 $M_{mat}$  = the total mass, in pounds, of material as applied during the calendar month  
 $W_{hap}$  = the total weight fraction of HAPs contained in the material, i, as applied

(9 VAC 5-80-110)

3. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
  - a. The annual quantity of fugitive and non-fugitive VOCs emitted from the facility, calculated monthly as the sum of each consecutive twelve (12) month period.
  - b. Annual throughput of VOC (in tons) to the flexographic printers (ES-31, ES-67, ES-115 and ES-116), calculated monthly as the sum of each consecutive twelve (12) month period.

- c. Annual VOC emissions (in tons) for the flexographic printers (ES-31, ES-67, ES-115 and ES-116), calculated monthly as the sum of each consecutive twelve (12) month period.
- d. The total mass (in pounds) and organic hazardous air pollutants content of each material applied on the flexographic printers (ES-31, ES-67, ES-115 and ES-116) during each month.
- e. Material Safety Data Sheets (MSDS) or other vendor information showing the VOC content, HAP content, water content and solids content of each material applied on the flexographic printers (ES-31, ES-67, ES-115 and ES-116).
- f. Records demonstrating the inks used in the flexographic printers (ES-31, ES-67, ES-115 and ES-116) meet the definition of compliant ink in 9 VAC 5-40-5070.
- g. The volatile organic compound stored in each storage tank (ES-110 and ES-114) and its vapor pressure in pounds per square inch under actual storage and filling conditions.
- h. Records certifying the design of and control method for each storage tank (ES-110 and ES-114).

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years. The records required in Condition V.B.3.b shall be submitted, upon request, to the Director, Valley Region. Copies of these records shall also be submitted concurrently to the U.S. Environmental Protection Agency at the following address:

U.S. EPA Region III  
Air Protection Division (3AP00)  
ATTN: Printing and Publishing Industry NESHAP Coordinator  
1650 Arch Street  
Philadelphia, PA 19103-2029

(9 VAC 5-80-110, 40 CFR 63.829(e), 9 VAC 5-40-3520, Condition 9 of 3/25/03 Permit and Condition 11 of 3/21/03 Permit)

### **C. Testing**

- 1. The facility shall test, at the request of the DEQ, to determine if inks used at the facility meet the definition of compliant ink as stated in 9 VAC 5-40-5070.  
(9 VAC 5-80-110 and Condition 9 of 3/21/03 Permit)

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method
VOC	EPA Methods 18, 24, 24A, 25, 25A (40 CFR 60, Appendix A)
Hazardous Air Pollutants	EPA Method 311 (40 CFR 63, Appendix A)

(9 VAC 5-80-110)

#### **D. Reporting**

1. Within 30 days following the end of each calendar quarter, Pactiv Corporation shall submit a report to the Director, Valley Region. Each report shall include the annual quantity of fugitive and non-fugitive VOCs emitted from the facility, calculated as the sum of each consecutive twelve (12) month period.  
(9 VAC 5-80-110)
2. The permittee shall submit each notification in 40 CFR 63, Subpart SS, Table 12 of 40 CFR 63, Subpart EEEE and 40 CFR 63.2382(b) through 40 CFR 63.2382(d) that is applicable. Each notification shall be submitted according to the schedule in Table 12 of 40 CFR 63, Subpart EEEE and as specified in 40 CFR 63.2382(b) through 40 CFR 63.2382(d).  
(9 VAC 5-80-110, 9 VAC 5-60-90, 9 VAC 5-60-100 and 40 CFR 63.2382(a))



## VI. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
ES-1	Resin Storage Silo #1	9 VAC 5-80-720 B	PM/PM-10	
ES-2	Resin Storage Silo #2	9 VAC 5-80-720 B	PM/PM-10	
ES-3	Resin Storage Silo #3	9 VAC 5-80-720 B	PM/PM-10	
ES-4	Resin Storage Silo #4	9 VAC 5-80-720 B	PM/PM-10	
ES-5	Resin Storage Silo #5	9 VAC 5-80-720 B	PM/PM-10	
ES-6	Resin Storage Silo #6	9 VAC 5-80-720 B	PM/PM-10	
ES-7	Resin Storage Silo #7	9 VAC 5-80-720 B	PM/PM-10	
ES-8	Resin Storage Silo #8	9 VAC 5-80-720 B	PM/PM-10	
ES-9	Resin Storage Silo #9	9 VAC 5-80-720 B	PM/PM-10	
ES-10	Resin Storage Silo #10	9 VAC 5-80-720 B	PM/PM-10	
ES-11	Resin Storage Silo #11	9 VAC 5-80-720 B	PM/PM-10	
ES-12	Resin Storage Silo #12	9 VAC 5-80-720 B	PM/PM-10	
ES-13	Resin Storage Silo #13	9 VAC 5-80-720 B	PM/PM-10	
ES-14	Resin Storage Silo #14	9 VAC 5-80-720 B	PM/PM-10	
ES-15	Vacuum Transfer Blower	9 VAC 5-80-720 B	PM/PM-10	
ES-15a	Vacuum Transfer Blower	9 VAC 5-80-720 B	PM/PM-10	
ES-15b	Vacuum Transfer Blower	9 VAC 5-80-720 B	PM/PM-10	
ES-16	Vacuum Transfer Blower	9 VAC 5-80-720 B	PM/PM-10	
ES-16a	Vacuum Transfer Blower	9 VAC 5-80-720 B	PM/PM-10	
ES-17	Vacuum Transfer Blower	9 VAC 5-80-720 B	PM/PM-10	
ES-18	Vacuum Transfer Blower	9 VAC 5-80-720 B	PM/PM-10	
ES-19	Vacuum Transfer Blower	9 VAC 5-80-720 B	PM/PM-10	
ES-19a	Vacuum Transfer Blower	9 VAC 5-80-720 B	PM/PM-10	
ES-35	Heated Press (Thermoformer)	9 VAC 5-80-720 B	VOC	

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
ES-36	Heated Press (Thermoformer)	9 VAC 5-80-720 B	VOC	
ES-37	Heated Press (Thermoformer)	9 VAC 5-80-720 B	VOC	
ES-38	Heated Press (Thermoformer)	9 VAC 5-80-720 B	VOC	
ES-39	Heated Press (Thermoformer)	9 VAC 5-80-720 B	VOC	
ES-40	Heated Press (Thermoformer)	9 VAC 5-80-720 B	VOC	
ES-41	Heated Press (Thermoformer)	9 VAC 5-80-720 B	VOC	
ES-214	Heated Press (Thermoformer)	9 VAC 5-80-720 B	VOC	
ES-47	Green Colorant Storage Silo #15	9 VAC 5-80-720 B	PM/PM-10	
ES-59	Resin Storage Silo #15	9 VAC 5-80-720 B	PM/PM-10	
ES-61	Resin Storage Silo #18	9 VAC 5-80-720 B	PM/PM-10	
ES-62	Resin Storage Silo #19	9 VAC 5-80-720 B	PM/PM-10	
ES-63	Resin Storage Silo #20	9 VAC 5-80-720 B	PM/PM-10	
ES-60a	Flame Retardant Bin #18	9 VAC 5-80-720 B	PM/PM-10	
ES-60b	Flame Retardant Bin #19	9 VAC 5-80-720 B	PM/PM-10	
ES-70	Beringer Pressure Plate Cleaner	9 VAC 5-80-720 B	VOC	
ES-111	Blowing Agent Tank	9 VAC 5-80-720 B	non-VOC	
ES-112	Fork Lift Propane Tank	9 VAC 5-80-720 B	VOC	1,000 gallons
ES-113	Blowing Agent Tank	9 VAC 5-80-720 B	non-VOC	
ES-117	Propane Tank	9 VAC 5-80-720 B	VOC	1,000 gallons
ES-118	Propane Tank	9 VAC 5-80-720 B	VOC	1,000 gallons
ES-119	Diesel Engine for Sprinkler System	9 VAC 5-80-720 B	Products of diesel fuel combustion	
ES-120	Diesel Engine for Sprinkler System	9 VAC 5-80-720 B	Products of diesel fuel combustion	

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

## VII. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
9 VAC 5 Chapter 40, Articles 5 thru 24, 26 thru 35 and 37 thru 54	Emissions Standards for Various Source Categories (Rules 4-5 thru 4-24, 4-26 thru 4-35 and 4-37 thru 4-54)	Applicable to the respective source category.
9 VAC 5 Chapter 50, Article 5	Environmental Protection Agency Standards of Performance For New Stationary Sources	U.S. Environmental Protection Agency Regulations on Standards of Performance For New Stationary Sources (40 CFR Part 60)
9 VAC 5 Chapter 50, Article 6	Standards of Performance For Regulated Medical Waste Incinerators (Rule 5-6)	Applicable to each regulated medical waste incinerator.
9 VAC 5 Chapter 60, Article 1	Environmental Protection Agency National Emission Standards For Hazardous Air Pollutants (Rule 6-1)	U.S. Environmental Protection Agency Regulations on National Emission Standards For Hazardous Air Pollutants (40 CFR Part 61)
9 VAC 5 Chapter 60, Article 4	Emissions Standards for Toxic Pollutants for Existing Sources (Rule 6-4)	Applicable to any stationary source (or portion of it) constructed, modified or relocated prior to March 17, 1972.
9 VAC 5 Chapter 70	Air Pollution Episode Prevention	Applicable in nonattainment areas designated in 9 VAC 5-20-204.
9 VAC 5 Chapter 80, Article 9	Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas	Applicable to the construction or reconstruction of any major stationary source or major modification in nonattainment areas.
9 VAC 5 Chapter 80, Article 3	Acid Rain Operating Permits	Applicable to any affected source that has an affected unit under the provisions of 9 VAC 5-80-380, except as provided in 9 VAC 5-80-360 C.

Citation	Title of Citation	Description of Applicability
9 VAC 5 Chapter 91	Regulations for the Control of Motor Vehicle Emissions	Applicable to the Northern Virginia program area.
9 VAC 5 Chapter 150	Regulation for Transportation Conformity	Applicable in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan.
9 VAC 5 Chapter 160	Regulation for General Conformity	Applicable in all nonattainment and maintenance areas for criteria pollutants for which the area is designated nonattainment or has a maintenance plan.
9 VAC 5 Chapter 190	Variance for Merck Stonewall Plant	-

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.  
(9 VAC 5-80-140)

## **VIII. General Conditions**

### **A. Federal Enforceability**

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

(9 VAC 5-80-110 N)

### **B. Permit Expiration**

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

### C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
  - a. The date, place as defined in the permit, and time of sampling or measurements.
  - b. The date(s) analyses were performed.
  - c. The company or entity that performed the analyses.
  - d. The analytical techniques or methods used.
  - e. The results of such analyses.
  - f. The operating conditions existing at the time of sampling or measurement.

(9 VAC 5-80-110 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

(9 VAC 5-80-110 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.
- b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:

(1) Exceedance of emissions limitations or operational restrictions;

(2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,

(3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”

(9 VAC 5-80-110 F)

#### **D. Annual Compliance Certification**

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.
2. The identification of each term or condition of the permit that is the basis of the certification.
3. The compliance status.
4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
6. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)  
U. S. Environmental Protection Agency, Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029.

(9 VAC 5-80-110 K.5)

**E. Permit Deviation Reporting**

The permittee shall notify the Director, Valley Region, within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition VIII.C.3 of this permit.  
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

**F. Failure/Malfunction Reporting**

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Valley Region, by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Valley Region.  
(9 VAC 5-20-180 C)

**G. Severability**

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.  
(9 VAC 5-80-110 G.1)

**H. Duty to Comply**

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.  
(9 VAC 5-80-110 G.2)

**I. Need to Halt or Reduce Activity not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.  
(9 VAC 5-80-110 G.3)



**J. Permit Modification**

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1790, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios. (9 VAC 5-80-190 and 9 VAC 5-80-260)

**K. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege. (9 VAC 5-80-110 G.5)

**L. Duty to Submit Information**

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality. (9 VAC 5-80-110 G.6)
2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G. (9 VAC 5-80-110 K.1)

**M. Duty to Pay Permit Fees**

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. (9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

**N. Fugitive Dust Emission Standards**

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;
4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-50-90)

**O. Startup, Shutdown, and Malfunction**

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20 E)

**P. Alternative Operating Scenarios**

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.

(9 VAC 5-80-110 J)

**Q. Inspection and Entry Requirements**

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

#### **R. Reopening For Cause**

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

#### **S. Permit Availability**

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.

(9 VAC 5-80-150 E)

#### **T. Transfer of Permits**

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.  
(9 VAC 5-80-160)
2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.  
(9 VAC 5-80-160)
3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.  
(9 VAC 5-80-160)

#### **U. Malfunction as an Affirmative Defense**

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.
2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
  - a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
  - b. The permitted facility was at the time being properly operated.
  - c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
  - d. The permittee notified the board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit

requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

#### **V. Permit Revocation or Termination for Cause**

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80, Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any of the grounds for revocation or termination or for any other violations of these regulations.

(9 VAC 5-80-190 C and 9 VAC 5-80-260)

#### **W. Duty to Supplement or Correct Application**

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.

(9 VAC 5-80-80 E)

#### **X. Stratospheric Ozone Protection**

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.

(40 CFR Part 82, Subparts A-F)

#### **Y. Asbestos Requirements**

The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).

(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)

**Z. Accidental Release Prevention**

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.

(40 CFR Part 68)

**AA. Changes to Permits for Emissions Trading**

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

(9 VAC 5-80-110 I)

**BB. Emissions Trading**

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

**CC. Operational Flexibility**

The provisions of 9 VAC 5-80-280 regarding operational flexibility apply.

(9 VAC 5-80-280)

## **IX. State-Only Enforceable Requirements**

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.

### **A. Limitations**

1. Exhaust streams containing halogenated blowing agents shall not be routed to the RTO (ES-75), unless DEQ has provided prior written approval to vent such streams to the RTO (ES-75).  
(9 VAC 5-80-110 and Condition 19 of 3/25/03 Permit)
2. Emissions of ethyl chloride from the operation of the facility shall not exceed 150 pounds per hour.  
(9 VAC 5-80-110 and Condition 20 of 3/25/03 Permit)

### **B. Monitoring and Recordkeeping**

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to, the annual quantity of fugitive and non-fugitive ethyl chloride emitted from the facility calculated monthly as the sum of each consecutive twelve (12) month period. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110 and Condition 21 of 3/25/03 Permit)

(9 VAC 5-80-110 N and 9 VAC 5-80-300)

**Regenerative Thermal Oxidizer (RTO) Compliance Assurance Monitoring (CAM) Plan  
(Unit: ES-75)**

	<b>Indicator 1</b>	<b>Indicator 2</b>	<b>Indicator 3</b>
<b>I. Indicator</b>	Chamber temperature	Work practice	Periodic destruction efficiency testing
<b>Measurement Approach</b>	The chamber temperature is monitored by a thermocouple.	Visual inspection of the supplemental fuel indicator valves confirming valves are in an “ON” position every operating day. Annual inspection of the two poppet valves within the RTO.	Once every five years, testing according to reference method 25 or 25A (40 CFR 60, Appendix A) shall be conducted to verify destruction efficiency.
<b>II. Indicator Range</b>	An excursion is defined as a temperature reading less than 1450°F or greater than 2100°F, except during annual inspections required under Indicator 2. Excursions trigger an inspection, corrective action and a reporting requirement	An excursion is defined as failure to perform an annual poppet valve inspection or supplemental fuel indicator valve inspections every operating day.	Greater than or equal to 95% VOC destruction efficiency.
<b>Quality Improvement Plan (QIP) Threshold</b>	No more than six excursions above or below the indicator range in any 6-month reporting period (temperatures below indicator range during annual inspections required under Indicator 2 are not considered excursions).	N/A	N/A
<b>III. Performance Criteria</b>			
<b>Data Representativeness</b>	The sensor is installed in the RTO chamber as an integral part of the RTO design. The sensor measures temperatures from 559° to 2282°F and has a standard tolerance of +/- 0.75%. The chart recorder range is 0° to 2000°F, with minor divisions of 40°F.	N/A	The facility shall be operating at the maximum production rate during the testing.
<b>Verification of Operational Status</b>	N/A	N/A	N/A
<b>QA/QC Practices and Criteria</b>	Accuracy of the thermocouple will be verified by independently measuring the RTO temperature using an existing dual element thermocouple located within the RTO chamber via a hand-held meter. This accuracy check will be conducted at least annually by trained personnel. The acceptance criterion is +/- 40°F.	N/A	Trained personnel to perform test. Test procedures shall be as required by reference method 25 (40 CFR 60, Appendix A). A test protocol shall be submitted to and approved by the Director, Valley Region, prior to testing. One copy of the test results shall be submitted to the Director, Valley Region, within 60 days after test completion.
<b>Monitoring Frequency and Data Collection Procedure</b>	Measured and recorded continuously on a Z-fold chart recorder.	Record results of annual inspections of the two poppet valves and daily inspections of the supplemental fuel indicator valves.	The test shall be performed within 6 months of the issuance of the permit and once every five years thereafter.